

RAM Technologies

PFC280PCX MEDICAL- GRADE POWER SUPPLY



The PFC280PCX is a 280-Watt medical grade ATX power supply designed especially to power ATX motherboards in critical medical applications

MADE IN THE USA

Specifications

Input

Input Voltage Range: 100 to 250 VAC +/-10%
Supply Overvoltage: Cat Two < 300V
Input current: 3.75A/4A max
Frequency: 50/60 Hz
Inrush Current: 35A Cold @ 264 VAC
Efficiency: 75% to 80% typ.
PFC Correction: Active > .95
Leakage Current: < 250uA @ 264 VAC 60 Hz
Input Fuses: 2X 6.3A 250V Line & Neutral

Output

Maximum continuous power: 280 Watts (*see note 5*)
Hold-up Time: > 40ms @ full load
Overvoltage Protection: +15% of set voltage
Overload Protection: Auto Recovery/ cycle pwr. on
Minimum Loading: None
Cross regulation: < 0.5%
Line Regulation: < 0.05%
Load Regulation: < 1% +/- cable factor
AC Turn-On Time: < 2 sec

Output Voltage	+12V	+5V	+3.3V	-12V	-5V	-5Vsb
	19A	23.5A	14A	1.2A	0.5A	1.0A
Ripple mV p-p	100	50	50	100	50	50

Notes:

1. Max. output from +5V & +3.3V+140W. When loading the +5V & +3.3V multiple total load by 1.2 and subtract from 280W
2. Derated output from 100 VAC to 85 VAC 3.5Watts/Volt
3. Total output shall not exceed 280 Watts
4. Initial voltage tolerance $\pm 3\%$
5. Draws air from outside of case

Environmental

Operational Temperature: 0 to 50°C
Storage Temperature: -40 to 80°C
Operational Humidity: 0 to 95% nc
Storage Humidity: 0 to 95% nc
Operational Altitude: -500 to 9840 ft
Storage Altitude: -500 to 40,000 ft
Pollution Degree Class: Two

Reliability

MTBF (demonstrated): > 500,000 hours
Expected Life: > 8 years when
use as specified

EMC Compliance:

EN61000-4-2 ESD Level 3
EN61000-4-3 RF susceptibility 3v/m
EN61000-4-4 EFT Level 3
EN61000-4-5 Surge Level 3
EN61000-3-2 Harmonics
EN61000-3-3 Flicker
EN61000-4-11 Voltage Dips, Short Interruptions
EN55011 Conducted and Radiated Emissions

Standards Compliance:

Desktop Platform Form Factors: REV 1.1 March 07
IEC60601-1 2nd & 3rd edition
RoHS compliant UL file E191947 ISO9001:2008
Lead free RoHS and REACH compliant
Patient Protection: Two MOPP
ECCN# EAR99

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Safety approved to the following standards:

ANSI/AAMI ES 60601-1:2005 ME-Part 1 and CSA C22.2 No. 60601-1:08 (ME-Part 1: General Requirements for Basic Safety and Essential Performance)

IEC 60601-1:2005 (ME Part 1: General Requirements for Basic Safety and Essential Performance – Edition 3)

For Continued protection equipment must be grounded at all times in accordance with the requirements of class 1 devices.

RAM TECHNOLOGIES LLC declares that the PC and PCX power supplies are in conformity with the provisions of the low-voltage directive.

See website for enclosure CAD files.

Symbols Used



Attention, consult accompanying documents



Protective earth ground



Caution

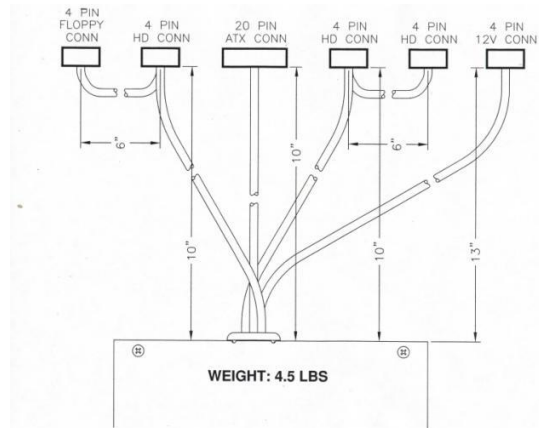
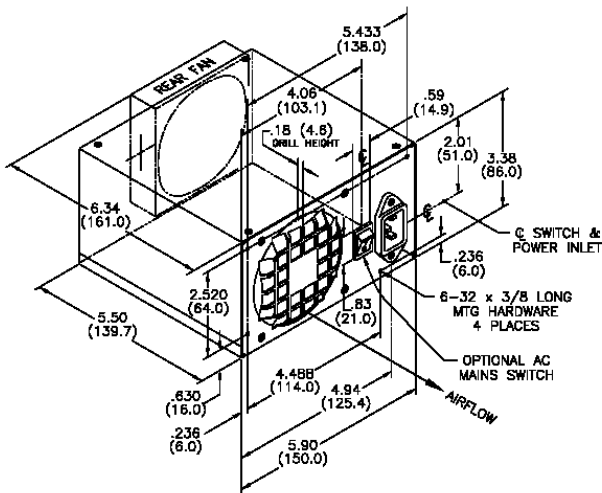
Power Good Signal

The Power Good Signal asserts itself high 200ms after all outputs have reached their operational values. Power Good Signal will go low when input stored energy can no longer support the outputs.

Intended Use

The PFC280PCX is intended to power imbedded ATX-style motherboards in mission-critical medical applications.

Mechanical Specifications



We offer a wide variety of output cables. Please contact the factory for details.

Note: The PFC280PCX does NOT have a rear fan.

P/N
620012

3ND) Black	1 5	White (+12V)
3ND) Black	2 6	White (+12V)
3ND) Black	3 7	White (+12V)
3ND) Black	4 8	White (+12V)

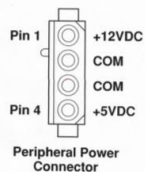
ATX12V Connector

(GND) Black	1 3	Yellow (+12V)
(GND) Black	2 4	Yellow (+12V)

P/N
620002 +
620031

(+3.3V) Orange	1 13	Orange (+3.3V)
(+3.3V) Orange	2 14	Blue (-12V)
(GND) Black	3 15	Black (GND)
(+5V) Red	4 16	Green (PS-ON)
(GND) Black	5 17	Black (GND)
(+5V) Red	6 18	Black (GND)
(GND) Black	7 19	Black (GND)
(PG) Gray	8 20	White (-5V)
(+5VSB) Violet	9 21	Red (+5V)
(+12V) Yellow	10 22	Red (+5V)
(+12V) Yellow	11 23	Red (+5V)
(+3.3V) Orange	12 24	Black (GND)

24-Pin Optional PCI-X Connector



(+3.3V) Orange	1 11	Orange (+3.3V)
(+3.3V) Orange	2 12	Blue (-12V)
(GND) Black	3 13	Black (GND)
(+5V) Red	4 14	Green (PS-ON)
(GND) Black	5 15	Black (GND)
(+5V) Red	6 16	Black (GND)
(GND) Black	7 17	Black (GND)
(PG) Gray	8 18	White (-5V)
(+5VSB) Violet	9 19	Red (+5V)
(+12V) Yellow	10 20	Red (+5V)

20-pin ATX Connector

